

Christopher R. Culpepper

CRC3510@RIT.EDU
(413) 376-5034

56 South St.
Drury MA, 01343

www.github.com/cculpepper

CAREER OBJECTIVE

To start a career in the field of Systems or Computer Engineering starting in May 2017 designing electronic hardware, Systems Engineering, or creating embedded software, preferably in Aerospace.

EXPERIENCE

Systems Engineering *July 2013 - Present*

General Dynamics Mission Systems, Pittsfield MA

- Performed integration and repair operations on legacy hardware
- Diagnosed build issues with hardware and software installations
- Performed software and systems testing on weapon control software
- Managed requirements and test cases
- Developed automated testing tracker that was used to status testing progress to management

Test Engineer Co-op

January 2016 - May 2016

Space Exploration Technologies, Hawthorne CA

- Created software to automate the creation of trouble reports
- Developed tests to test flight avionics hardware
- Troubleshoot issues with avionics test racks

Computer Engineering Lab Teaching Assistant

January 2015 - Present

Computer Engineering Department, RIT, Rochester, NY

- Responsible for grading reports and assisting with ARM assembly and digital IC design

PROJECTS

High Altitude Balloon Telemetry Tracker

- Personally developed hardware and software design and implementation
- Developing radio board to have the ability to use FSK, AFSK, or audio-based protocols
- Utilized multiple PCBs in order to separate functionality and increase reusability
- Can communicate GPS and other sensor data to the Amateur Radio APRS network

Wideband Oxygen Sensor Controller

- Designed, built and programmed sensor controller that measured oxygen concentration
- Incorporated PID loops to keep a sensor at a constant temperature and oxygen concentration
- Could have been calibrated to measure accurate oxygen concentrations

Assembly Language Pong Game

- Created a 1.5D Pong game for a school project in HCS12 assembly
- Required HCS12 assembly, PWM, ADC and digital output

Radio-Internet Hotspot Transceiver (Multidisciplinary Senior Design)

- Worked on a multidisciplinary group consisting of 3 EEs
- Device acts as an audio bridge between RF and the Allstar radio network
- Completing entire design process from customer requirements to prototyping and handoff.

AWARDS & SKILLS

Eagle Scout

A+ Certified

Languages & Software:

C
Python
Microsoft Office
Linux
Kicad PCB Design Software

Visual Basic for Applications (VBA)
VHDL
ARM & HCS12 Assembly
DOORs Requirement Management
Networking Equipment Configuration

EDUCATION

Bachelor of Science, Computer Engineering GPA: 3.03

Rochester Institute of Technology, Rochester NY, Expected May 2017

Interface and Digital Electronics
Data Communication and Networks
Introduction to Software Engineering
Assembly Language Programming

Digital IC Design
Cyborg Theory
HW & SW Design for Crypto Applications
Introduction to Harmonic and the Blues

COMMUNITY SERVICE

Assistant Scoutmaster at Boy Scout Troop 88, North Adams, MA

- Mentored Scouts to achieve rank and acquire valuable life skills

Radio communication at Multiple Road Rallies

- Operated in a high-stress environment to prevent accidents and mistakes
- Responsible for maintaining communication for racing stages and to central management
- Relayed pertinent information to competitors, stage captain and race officials

PERSONAL INTERESTS AND HOBBIES

Working Towards Pilot Licence
Amateur Radio Extra
K2GXT RIT Amateur Radio Club

Motorcycle and Automobile repair
Film Photography
Licked Thing That Was in Space